



NATIONAL PANASONIC

Service Manual

ORDER NO. RD-740

MW-LW 2-BAND PORTABLE RADIO

MODEL **R-2058L**



SPECIFICATIONS

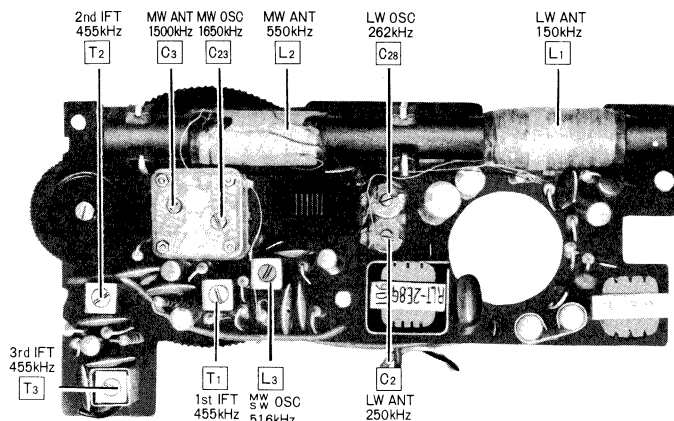
Frequency Range :	MW 525~1605 kHz (571~186m) LW 150~250 kHz (2000~1200m)
Intermediate Frequency :	455 kHz
Transistors :	2SA102 Converter 2SA101 1st IF Amplifier 2SA101 2nd IF Amplifier 2SB175 AF Amplifier 2SB176 } Power Amplifier (push-pull) 2SB176 }
Diode :	O A 9 0 Detector & AGC
Sensitivity :	MW 100 μ V/m for 50mW Output LW 300 μ V/m for 50mW Output
Power Output :	250mW Maximum
Batteries :	6V (Four "AA" size penlight batteries) (NATIONAL UM-3 or equivalent)
Speaker :	6.5cm (2½") PM Dynamic Speaker, Imp. 8 Ω
Cabinet Dimensions :	152(Wide) × 80(High) × 43(Deep)mm (5¾" × 3½" × 1⅞")
Weight :	350g. (12½ oz.) without batteries

〈EXPORT DIVISION〉

MATSUSHITA ELECTRIC TRADING CO., LTD.
P. O. Box 288 Central, Osaka, Japan

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.
RADIO and STEREO DIVISION

■ ALIGNMENT INSTRUCTIONS

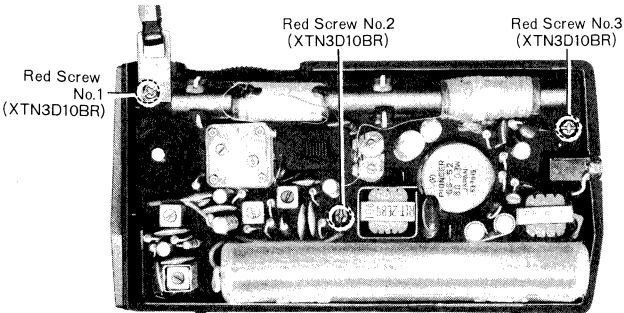


IF & RF ALIGNMENT

Output of signal generator should be no higher than necessary to obtain an output reading Set volume control to maximum. Set power source voltage to 6V DC.						
Band Switch Position	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUSTMENT	REMARKS
1	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455 kHz (1000Hz Mod.)	Tuning gang fully closed.	Output meter across earphone jack.	T ₁ (1st IFT) T ₂ (2nd IFT) T ₃ (3rd IFT)	Adjust for maximum output.
		516 kHz (1000Hz Mod.)	"	"	L ₃ (OSC Coil)	Adjust for maximum output.
		1650 kHz (1000Hz Mod.)	Tuning gang fully open.	"	C ₂₃ (OSC Trimmer)	Adjust for maximum output. Repeat steps (2) and (3).
4	"	262 kHz (1000Hz Mod.)	Tuning gang fully open.	"	C ₂₈ (OSC Trimmer)	Adjust for maximum output.
5	"	150 kHz (1000Hz Mod.)	Tune to Signal	"	L ₁ (ANT Coil)	Adjust for maximum output by sliding coil (L ₁) along ferrite core.
		250 kHz (1000Hz Mod.)	Tune to Signal	"	C ₂ (ANT Trimmer)	Adjust for maximum output. Repeat steps (5) and (6).
7	"	550 kHz (1000Hz Mod.)	Tune to Signal	"	L ₂ (ANT Coil)	Adjust for maximum output by sliding coil (L ₂) along ferrite core.
		1500 kHz (1000Hz Mod.)	Tune to Signal	"	C ₃ (ANT Trimmer)	Adjust for maximum output. Repeat steps (7) and (8).

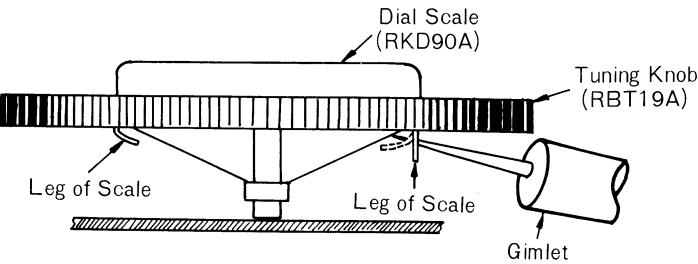
■ TO REMOVE CHASSIS

1. Pry the back cover open with a coin or key.
2. Remove three (3) red chassis screws, nos. 1~3, as illustrated in figure below.
3. To remove chassis completely, unsolder lead wires to speaker terminals and remove two speaker screws.
4. To reassemble, reverse the above procedure.

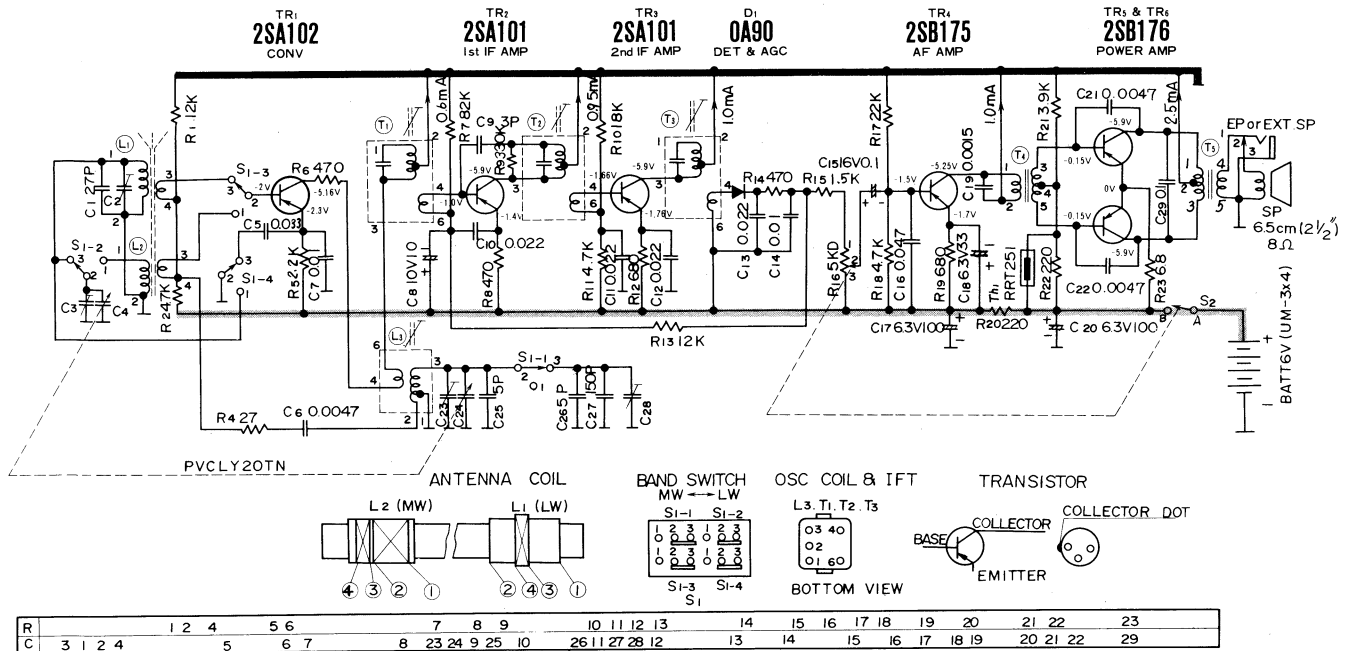


■ TO REMOVE DIAL SCALE & TUNING KNOB

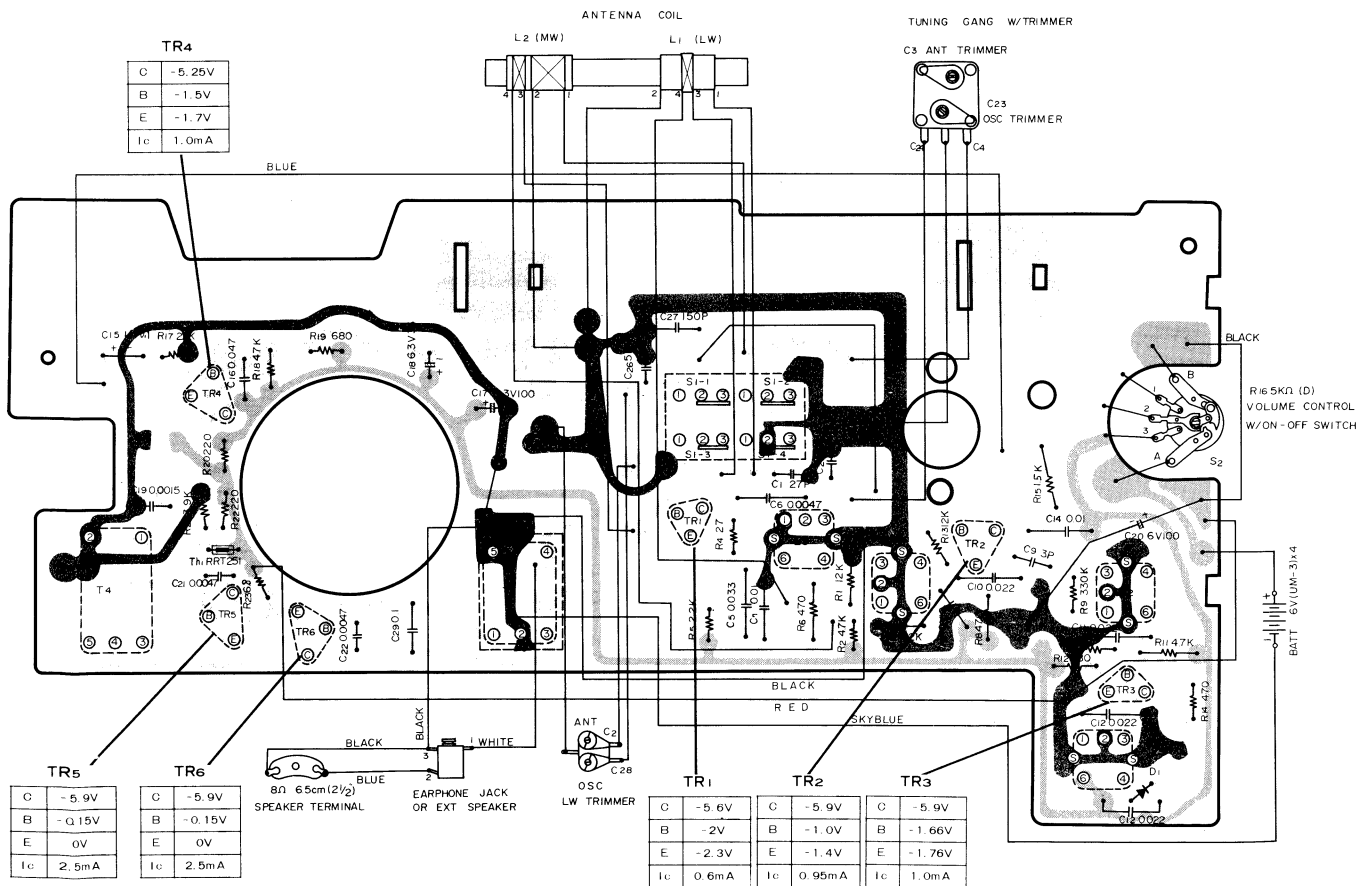
1. Remove dial scale.
2. Remove tuning knob screw.
3. To reassemble, reverse the above procedure.



Schematic Diagram – Model R-2058L



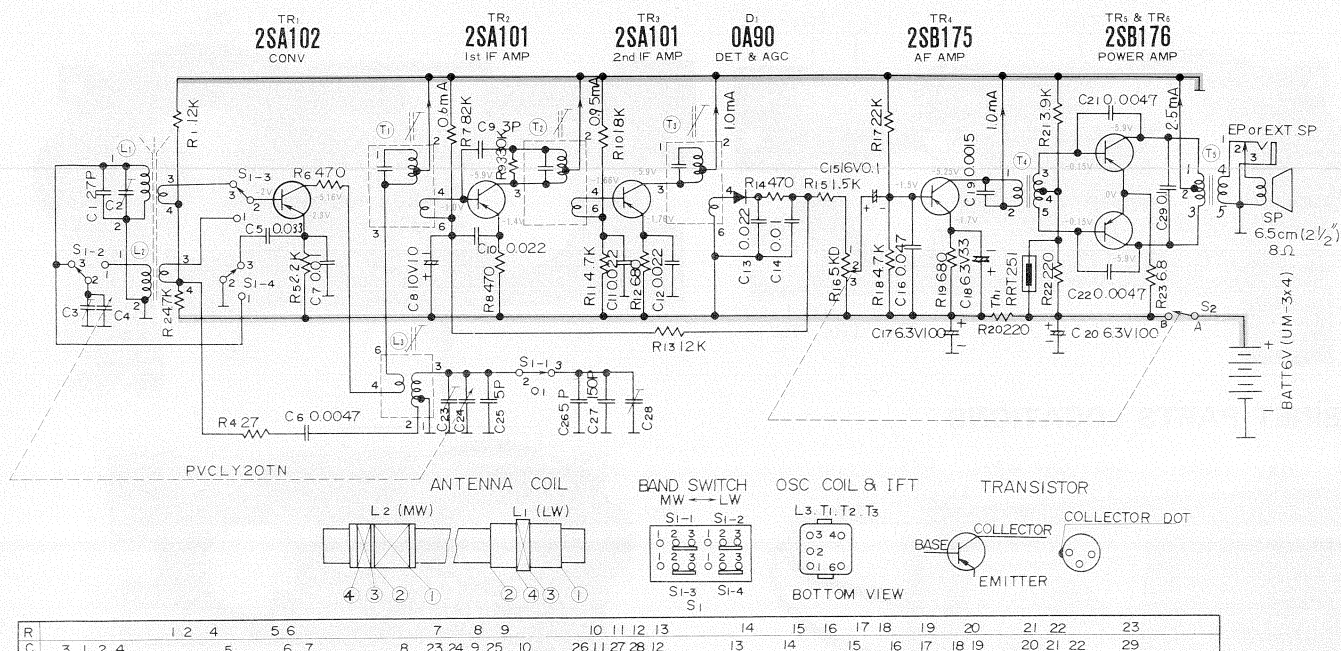
Circuit Board Wiring View – Model R-2058L



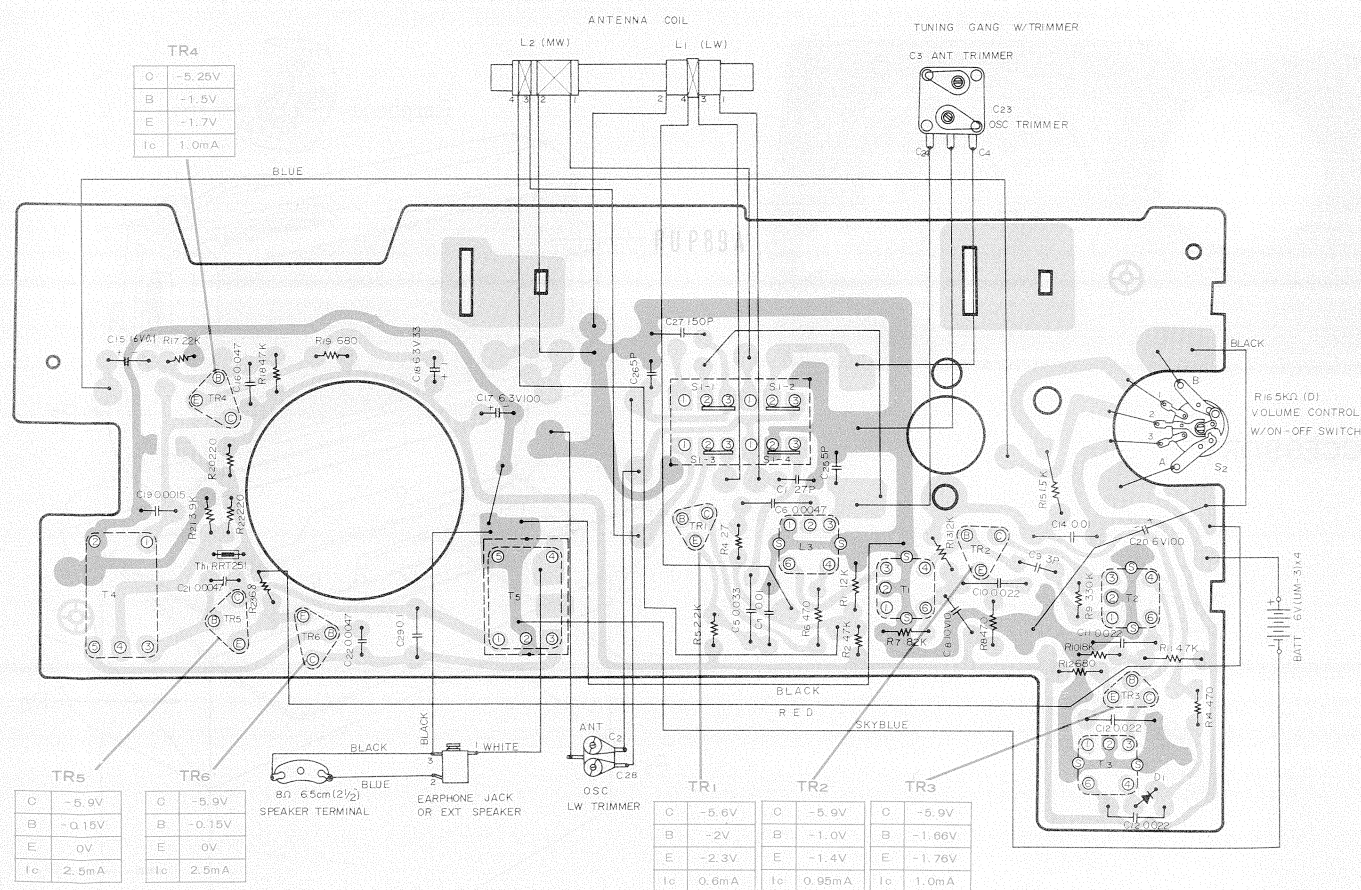
Positive Voltage Line

Negative Voltage Line

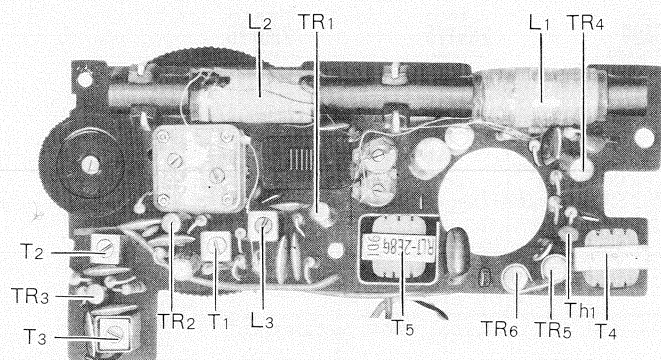
Schematic Diagram - Model R-2058L



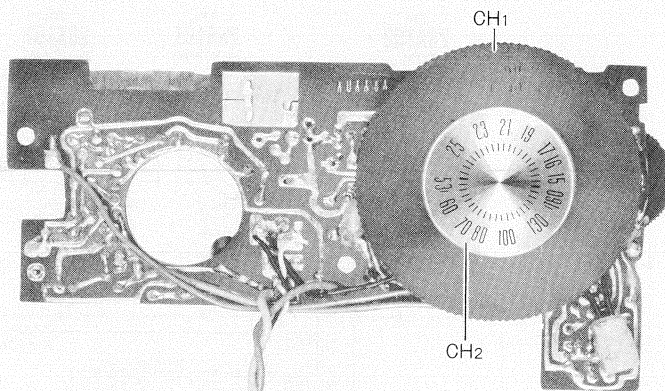
Circuit Board Wiring View - Model R-2058L



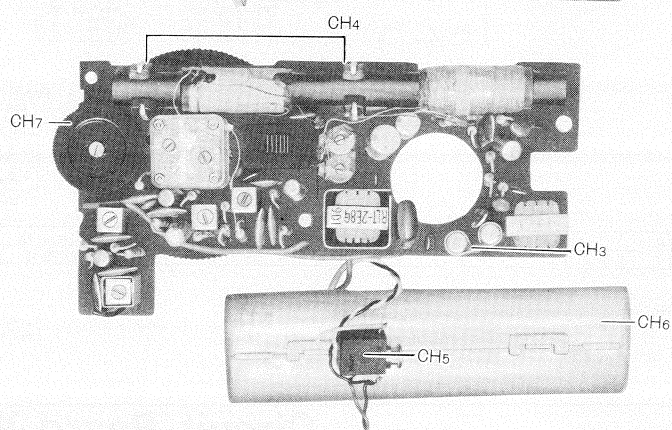
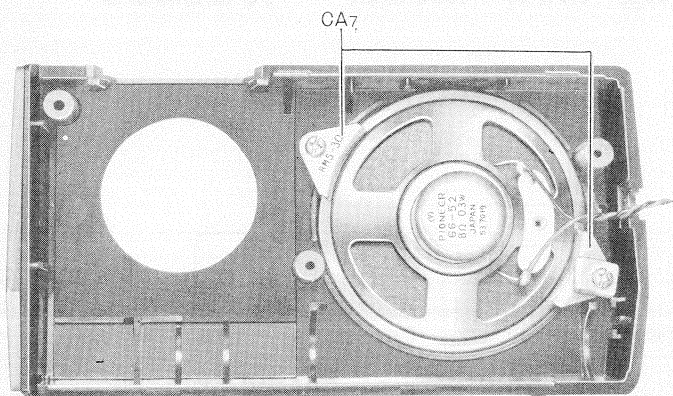
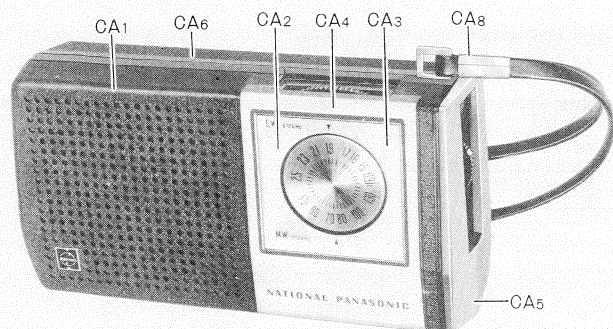
■ ELECTRIC PARTS LOCATIONS



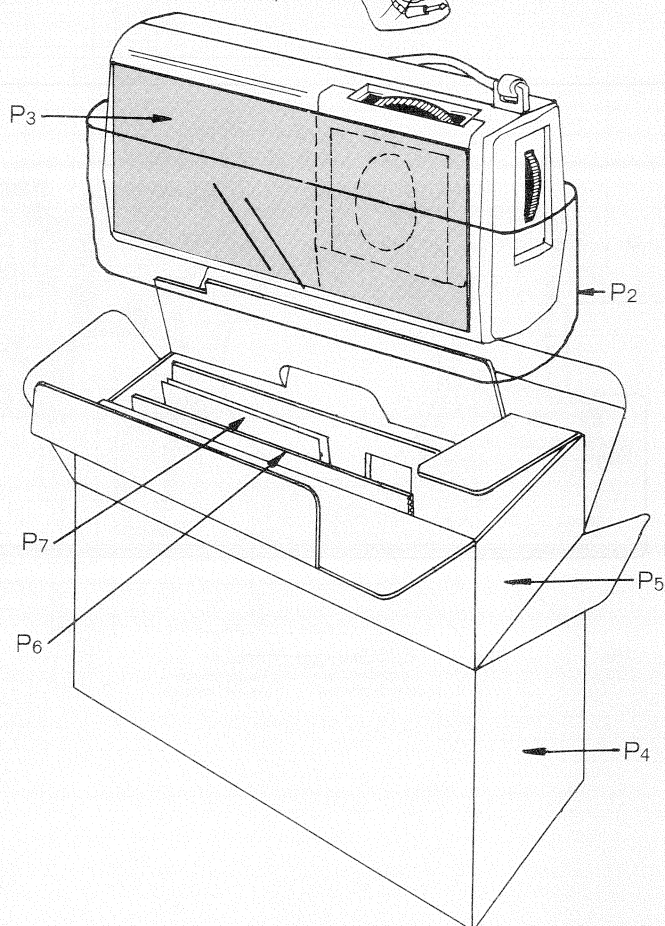
■ CHASSIS PARTS LOCATIONS



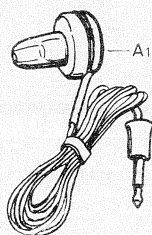
■ CABINET PARTS LOCATIONS



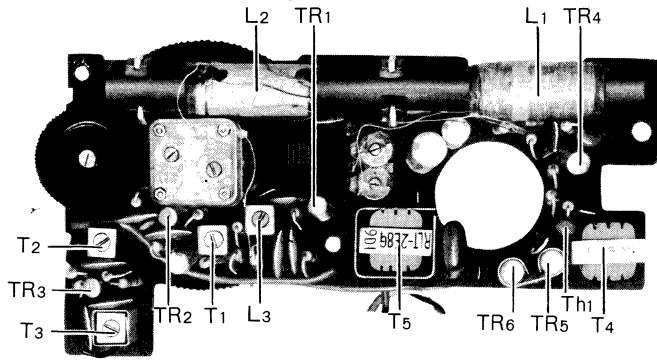
■ PACKING PARTS LOCATIONS



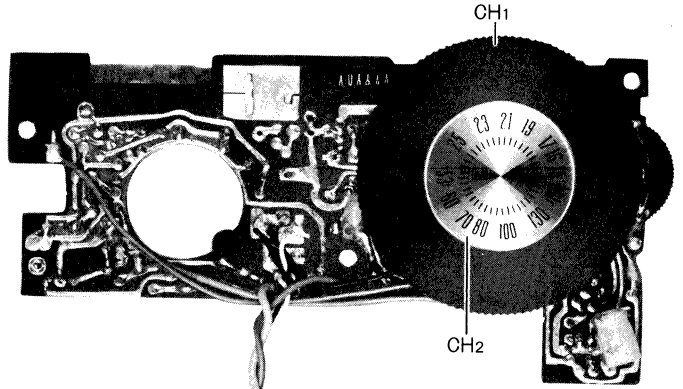
■ ACCESSORY



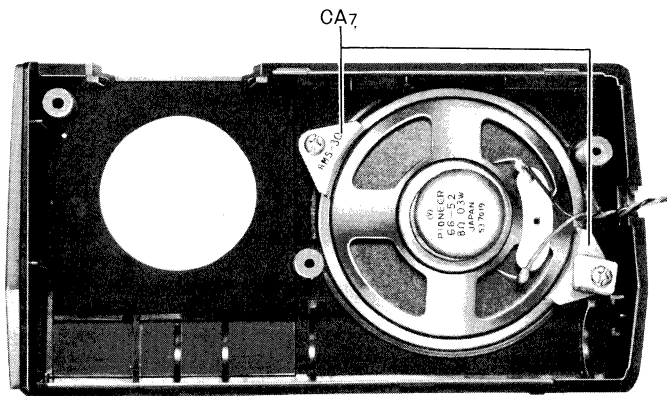
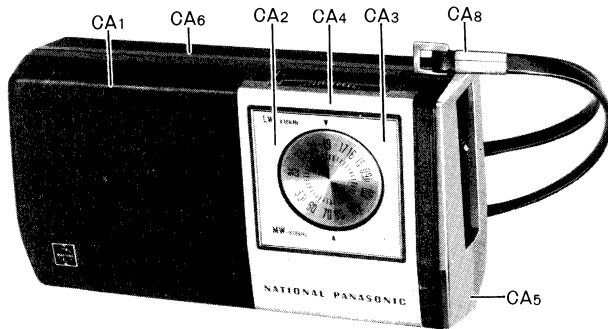
■ ELECTRIC PARTS LOCATIONS



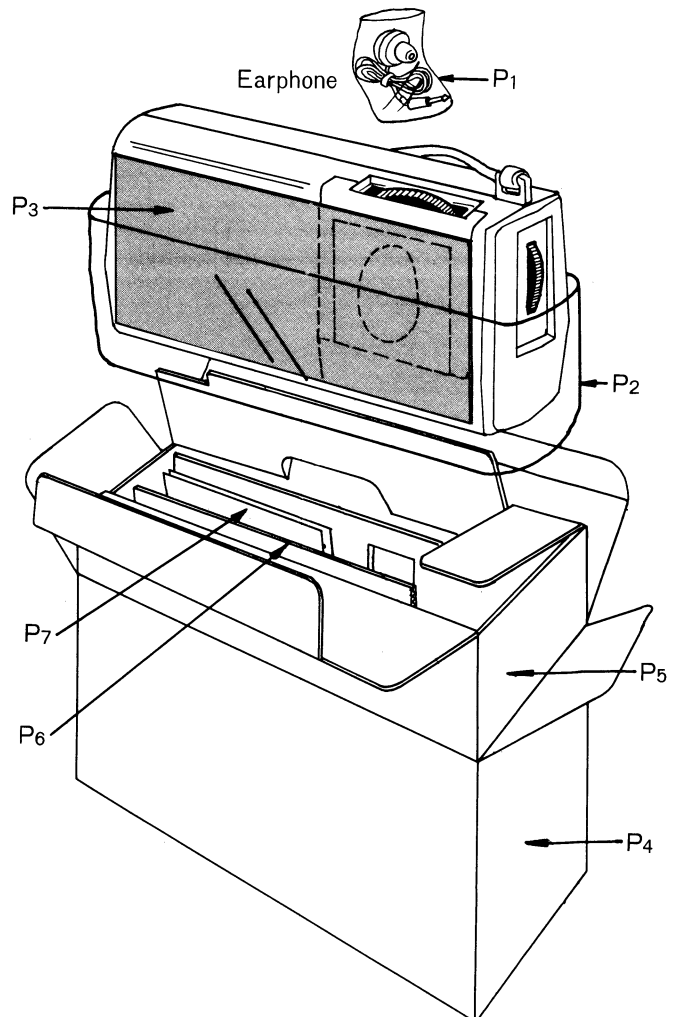
■ CHASSIS PARTS LOCATIONS



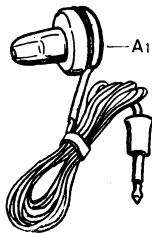
■ CABINET PARTS LOCATIONS



■ PACKING PARTS LOCATIONS



■ ACCESSORY

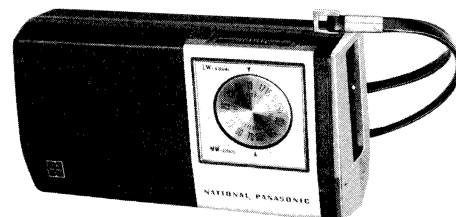




REPLACEMENT PARTS LIST

RADIO MODEL R-2058L

- NOTES:**
1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts orders.
 2. ISO metric thread screws & parts which employ ISO metric thread screws are identified by ISO marking (**ISO**).
 3. **N** indicates the New Parts.
 4. **A~C** rank: **A** rank parts will cover 80% of repair needs.
A+B rank parts will cover 95% of repair needs.
C rank parts are less necessary.
 5. Old part No. is shown in ().
 6. Please use the "Price" column as desired.
 7. These parts are illustrated on prior pages according to their reference numbers.



R-2058L

Ref.No.	Part No.	Description	Per Set (Pcs.)	Remarks	Price	
TRANSISTORS AND DIODE						
TR ₁	2SA102	Converter	1	A		
TR _{2,3}	2SA101	1st & 2nd IF Amplifier	2	A		
TR ₄	2SB175	AF Amplifier	1	A		
TR _{5,6}	2SB176	Power Amplifier(Push-pull)	2	A		
D ₁	0A90	Detector & AGC	1	A		
THERMISTOR						
Th ₁	RRT251 (MT-250)	Temperature Compensator	1	A		
COILS AND TRANSFORMERS						
L _{1,2}	RLF6D5-U	LW& MW Antenna Coil	1	A		
L ₃	RLO2B43-M	Oscillator Coil	1	A		
T ₁	RLI2B151-M	1st IF Transformer	1	A		
T ₂	RLI2B250-M	2nd IF Transformer	1	A		
T ₃	RLI2B451-M	3rd IF Transformer	1	A		
T ₄	RLT3E12-W	Input Transformer, P=8KΩ:S=4KΩ	1	A		
T ₅	RLT2E8-W	Output Transformer, P=200Ω:S=8Ω	1	A		
RESISTORS						
R ₂₃	ERD14VK6R8	6.8Ω, ¼Watt, ±10%, Carbon	1	B		
R ₄	ERD14VK270	27Ω, ¼Watt, ±10%, Carbon	1	B		
R _{20,22}	ERD14VK221	220Ω, ¼Watt, ±10%, Carbon	2	B		
R _{6,8,14}	ERD14VK471	470Ω, ¼Watt, ±10%, Carbon	3	B		
R _{12,19}	ERD14VK681	680Ω, ¼Watt, ±10%, Carbon	2	B		
R ₁₅	ERD14VK152	1.5KΩ, ¼Watt, ±10%, Carbon	1	B		
R ₅	ERD14VK222	2.2KΩ, ¼Watt, ±10%, Carbon	1	B		

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Ref.No.	Part No.	Description	Per Set (Pcs.)	Remarks	Price	
R ₂₁	ERD14VK392	3.9K Ω , ¼Watt, $\pm 10\%$, Carbon	1	B		
R _{2, 11, 18}	ERD14VK472	4.7K Ω , ¼Watt, $\pm 10\%$, Carbon	3	B		
R _{1, 13}	ERD14VK123	12K Ω , ¼Watt, $\pm 10\%$, Carbon	2	B		
R ₁₀	ERD14VK183	18K Ω , ¼Watt, $\pm 10\%$, Carbon	1	B		
R ₁₇	ERD14VK223	22K Ω , ¼Watt, $\pm 10\%$, Carbon	1	B		
R ₇	ERD14VK823	82K Ω , ¼Watt, $\pm 10\%$, Carbon	1	B		
R ₉	ERD14VK334	330K Ω , ¼Watt, $\pm 10\%$, Carbon	1	B		
VARIABLE RESISTORS						
R ₁₆	EVLM0BT12D53	5K Ω (D), Volume Control, W/ON-OFF Switch(S ₂)	1	A		
CAPACITORS						
C ₉	ECCD05030C	3mmf, 50WV, ± 0.25 mmf, Ceramic	1	C		
C _{25, 26}	ECCD05050CC	5mmf, 50WV, ± 0.25 mmf, Ceramic	2	C		
C ₁	ECCD05270KC	27mmf, 50WV, $\pm 10\%$, Ceramic	1	C		
C ₂₇	ECMS05151J-H	150mmf, 50WV, $\pm 5\%$, Mica	1	C		
C ₆	ECKE05472MY	0.0047mfd, 50WV, $\pm 20\%$, Ceramic	1	C		
C _{7, 14}	ECKE05103MY	0.01mfd, 50WV, $\pm 20\%$, Ceramic	2	C		
C _{10, 11, 12}	ECKE05223P	0.022mfd, 50WV, $\pm 100\%$, Ceramic	3	C		
C ₅	ECKE05333MY	0.033mfd, 50WV, $\pm 20\%$, Ceramic	1	C		
C ₁₉	ECQG05152MZ-N	0.0015mfd, 50WV, $\pm 20\%$, Polyester	1	C		
C ₁₃	ECQG05223MZ-N	0.022mfd, 50WV, $\pm 20\%$, Polyester	1	C		
C ₁₆	ECQG05473MZ-N	0.047mfd, 50WV, $\pm 20\%$, Polyester	1	C		
C ₂₉	ECQG05104MZ-N	0.1mfd, 50WV, $\pm 20\%$, Polyester	1	C		
C _{21, 22}	ECQG05472MZ-N	0.0047mfd, 50WV, $\pm 20\%$, Polyester	2	C		
C ₁₅	ECAG16ER1-Y	0.1mfd, 16WV, Electrolytic	1	B		
C ₈	ECEA10V10	10mfd, 10WV, Electrolytic	1	B		
C ₁₈	ECEA6V33	33mfd, 6.3WV, Electrolytic	1	B		
C _{17, 20}	ECEA6V100	100mfd, 6.3WV, Electrolytic	2	B		
VARIABLE CAPACITORS						
C _{4, 24}	PVCLY20TN	Tuning Gang, W/Trimmer (C _{3, 23})	1	A		
C _{2, 28}	RCV2T-16M	Trimmer	1	A		

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Ref.No.	Part No.	Description	Per Set (Pcs.)	Remarks	Price	
SWITCH						
S ₁₋₁ ~S ₁₋₄	RSS83	Band Selector Switch	1	A		
SPEAKER						
SP	RAS6P01S	65cm(2½") PM Dynamic Speaker, 8Ω	1	A		
CABINET						
	RYAR2058LX	Cabinet (Complete)	1	Ⓝ A		
	RYMR2058LX	Cabinet Front (Complete)	1	Ⓝ C		
CA ₁	RKM62A	Cabinet Only	1	Ⓝ C		
CA ₂	RDH20A	Ornament, Dial Scale	1	Ⓝ C		
CA ₃	RGP55A	Panel, Dial	1	Ⓝ B		
CA ₄	RGX146A	Ornament, Out Side of Crystal Panel	1	Ⓝ B		
CA ₅	RGC10A	Ornament, Volume Knob	1	Ⓝ B		
CA ₆	RKF45A	Cover Only, Cabinet Back	1	Ⓝ B		
	RGT127A	Name Plate	1	Ⓝ B		
CA ₇	RMS30	Bracket, Speaker	2	C		
CA ₈	RKH14B	Hand Strap	1	Ⓝ A		
CHASSIS						
CH ₁	RBT19A	Knob, Tuning	1	Ⓝ A		
CH ₂	RKD90A	Scale, Dial	1	Ⓝ B		
CH ₃	RMY6A	Heat Sink, Transistor	1	C		
CH ₄	RHG109	Rubber Cushion, Core Antenna M'tg.	2	C		
CH ₅	RJJ13A	Jack, Earphone or EXT Speaker	1	B		
CH ₆	RJK3419-2	Case, Battery	1	B		
CH ₇	RBV89	Knob, Volume	1	A		
	XTN3D10BR	Red Screw, Chassis M'tg.	3	B		
ACCESSORY						
A ₁	EAE1FB	Earphone, Magnetic Imp, 8Ω	1	A		
PACKING						
P ₁	RPF1A	Polyethylene Cover	1	C		
P ₂	RPP22A	Polyethylene Cover	1	Ⓝ C		
P ₃	RPH43A	Soft Sheet	1	C		
	RPK9066A	Gift Box(Complete)	1	Ⓝ B		
P ₄	RPK74A	Gift Box(Supply as RPK9066A)	(1)	Ⓝ C		

R-2058L

Ref.No.	Part No.	Description	Per Set (Pcs.)	Remarks	Price	
P ₅	RPN413A	Inside Carton(Supply as RPK9066A)	(1)	Ⓝ C		
P ₆	RPN449A	Inside Carton	1	Ⓝ C		
P ₇	RQX5172A	Instruction Book	1	Ⓝ B		

RECOMMENDED STOCK OF REPLACEMENT PARTS

Rank of Part	Estimated Selling Q'ty of Radio Set					
	100	500	1,000	2,000	5,000	10,000
A rank Parts	2	7	10	15	20	30
B rank Parts	1	3	5	7	10	20
C rank Parts	0	1	2	3	4	5